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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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JAY G. DURST  
BOYLE FREDRICKSON NEWHOLM STEIN & GRATZ S.C.  
250 EAST WISCONSIN AVENUE  
SUITE 1030  
MILWAUKEE, WI 53202

EXAMINER

NGUYEN, VINH P

ART UNIT PAPER NUMBER

2829

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

5M

**Office Action Summary**

Application No.

09/761,792

Applicant(s)

SU ET AL.

Examiner

VINH P NGUYEN

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 6-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 9, 11 and 14-20 is/are rejected.
- 7) ☒ Claim(s) 2-4, 6, 8, 10, 12 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

1. Claims 7 and 14-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 7 and 14, the limitation of “wherein the boosted drive signal is 20 to 30 percent of the probe drive signal above than the probe drive signal”. Should it be read as “wherein the boosted drive signal is 20 to 30 percent above the probe drive signal”?

In claim 15, it is unclear how the error signal is interrelated and associated with the phase signal in claim 9.

In claims 15-16, it is unclear how the oscillating amplitude is interrelated and associated with the phase signal in claim 9.

In claim 17, it is unclear what “a probe response signal” is and where it is from. Is it shown in any of drawings?

In claim 18, it is unclear how “an error signal” is interrelated and associated with the phase signal in claim 9. Furthermore, it is unclear how the error signal is created.

2. Claim 17 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

It appears that the original disclosure does not disclose "a probe response signal". There is no description of this signal in the drawings and the specification.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1,9,11,19-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Kitamura (pat # 6,281,495).

As to claims 1,9,11,19-20, Kitamura disclose a detector module (7,8,9,10) for detecting phase signals from an oscillating probe (1,5) and a boost module (11) coupled to the detector module (7,8,9,10) for boosting a probe drive signal to the oscillating probe (1,5) based on the detected phase signal from the detector module.

5. Claims 2-4,6,8,10,12-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art does not disclose the step of detecting the phase signal using a detector module with a precision full wave rectifier, an envelope detector, a comparator, an event detector and hold circuit , a multiplier, and an event level setting circuit.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Nose (Pat # 5,150,035) disclose an encoder having atomic or molecular structure reference scale.

Hlady et al (pat # 5,700,953) disclose method for mapping mechanical property of a material using a scanning force microscope.

Fletcha et al (pat # 5,773,824) disclose method for improving measurement accuracy using active lateral scanning control of a probe.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINH P. NGUYEN whose telephone number is (703) 305-4914.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4900 .

  
VINH P. NGUYEN  
PRIMARY EXAMINER  
ART UNIT 2829  
12/17/03